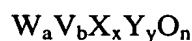What is claimed:

1. A process for preparing a catalyst comprising:

   (A) admixing metal compounds, at least one of which is an oxygen-containing compound, and at least one solvent to form a solution,

   (B) removing said at least one solvent from the solution to obtain a catalyst precursor, and

   (C) calcining said catalyst precursor at a temperature of from 350^0C to 850^0C under an inert atmosphere to form a catalyst having the formula

   $$W_aV_bX_xY_yO_n$$

   wherein a, b, x and y are molar fractions of W, V, X and Y, respectively, based on the total amount of W, V, X and Y, and n is the molar proportion of oxygen as determined by the oxidation state of W, V, X and Y,

   wherein a, b, x and y satisfy the following relationships

   $$0.25 < a < 0.98$$
   $$0.003 < b < 0.5$$
   $$0.003 < x < 0.5$$
   $$0.003 < y < 0.5$$

   wherein X is at least one element selected from the group consisting of

   Te, Bi, Sb and Se, and

   wherein Y is at least one element selected from the group consisting of Nb, Ta, Ti, Al, Zr, Cr, Mn, Fe, Ru, Co, Rh, Ni, Pd, Pt, B, In and Ce.
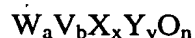
2. The process according to claim 1, wherein said at least one solvent is water.

3. The process according to claim 1, wherein X is Te and Y is Nb.

4. The process according to claim 1, wherein the inert atmosphere is not flowing over the surface of the catalyst precursor during calcination.

5. A process for preparing a catalyst comprising:

(A) admixing metal compounds, at least one of which is an oxygen-containing compound, and at least one solvent to form a solution,

(B) removing said at least one solvent from the solution to obtain a catalyst precursor, and

(C) calcining said catalyst precursor at a temperature of from 350^0C to 850^0C under an inert atmosphere to form a catalyst having the formula

$$W_aV_bX_xY_yO_n$$

wherein a, b, x and y are molar fractions of W, V, X and Y, respectively, based on the total amount of W, V, X and Y, and n is the molar proportion of oxygen as determined by the oxidation state of W, V, X and Y,

wherein a, b, x and y satisfy the following relationships

$$0.25 < a < 0.98$$
$$0.003 < b < 0.5$$
$$0.003 < x < 0.5$$
$$0.003 < y < 0.5$$

wherein X is at least one element selected from the group consisting of Te, Bi, Sb and Se,

wherein Y is at least one element selected from the group consisting of Mo, Nb, Ta, Ti, Al, Zr, Cr, Mn, Fe, Ru, Co, Rh, Ni, Pd, Pt, B, In and Ce,

with the proviso that Mo cannot be present in a molar fraction greater than 0.20.

6. The process according to claim 5, wherein said at least one solvent is water.

7. The process according to claim 5, wherein Y is a mixture of Nb and Mo.

8. The process according to claim 5, wherein the inert atmosphere is not flowing over the surface of the catalyst precursor during calcination.

9. A process for preparing an unsaturated aldehyde or carboxylic acid comprising subjecting an alkane to catalytic oxidation in the presence of a catalyst prepared by the process of claim 1.

10. A process for preparing an unsaturated aldehyde or carboxylic acid comprising subjecting an alkane to catalytic oxidation in the presence of a catalyst prepared by the process of claim 5.